

Amendments to the Drawings:

A new sheet of drawings including a newly proposed Fig. 9 is included herewith. It is believed that no new matter has been added by the addition of the new figure, as the subject matter of that figure is supported by the specification of the instant application.

Attachment: One (1) New Sheet of Drawings

Remarks:

Reconsideration of the application, as amended herein, is respectfully requested.

Claims 1 - 12 are presently pending in the application.

Claims 1 and 3 - 9 have been amended for purely grammatical reasons and to provide greater clarification of the claimed invention. As it is believed that claims 1 and 2 were patentable over the cited art in their original form, they have not been amended to overcome the references.

In item 3 of a final Office Action mailed October 26, 2005 ("the final Office Action"), claims 1 - 12 were rejected as allegedly being indefinite under 35 U.S.C. § 112, first paragraph. More specifically, it was alleged in the Office Action that:

The applicants have disclosed only a mechanical switch which is not by itself capable of performing the claimed functions without associated logic circuitry which has not been taught. The means for performing the various remote control operations are not taught. For example, the means to turn the collimator on/off, the means to switch to remote control mode after the triple click step, etc., are not taught. It is assumed that what is being claimed is more than just a switch.

Applicants' respectfully disagree and believe that the claims are fully enabled. More particularly, Applicants' show and describe in connection with Fig. 1, a portable x-ray unit 100

and associated handswitch 2. Further, in Figs. 3 - 8, there are described a series of operations performed by the portable x-ray unit 100 in response to certain operations of the handswitch 2. It is inherent to the operation, and any person of skill in the art would understand, that there is logic contained in the portable x-ray unit 100 that performs the operations set forth in Figs. 3 - 8, in response to particular operations of the handswitch 2. These operations performed by the portable x-ray unit 100 in response to the operation of the handswitch 2 are particularly described in paragraphs [0017] - [0038] of the instant invention. The person of ordinary skill in this art, upon reading Applicants' specification, will understand that, inherently, there is logic and functional controllers contained within the portable x-ray unit 100. No person skilled in x-ray technology or controllers, will assume the alternative, i.e., that there is some a genie in the box 100, performing the operations of Figs. 3 - 8 in response to depressions of the buttons of handswitch 2. Nor would a person of skill in the art need to resort to undue experimentation to program a controller to do the operations so clearly defined in Figs. 3 - 8.

As such, it is believed that inherently, the portable x-ray unit 100 includes logic that receives an input from the handswitch 2, and in response to the programming routines

defined by Figs. 3 - 8, controls the operations of various functions set forth in these routines. For example, Fig. 3 sets forth that operation of the handswitch 2 causes the portable x-ray unit 100 to drive the LED display to display KV and mAs values. As such, per the last three boxes of Fig. 3, the logic of the portable x-ray unit 100 contains a routine that, in response to one short actuation of the standby button the LED Driver is made to display the stored KV and/or mAs values. Similarly, the specification teaches that the portable x-ray unit 100, in response to certain specific actuations of the handswitch buttons additionally controls, among other peripherals: 1) an LED Driver, and storing of a KV value, per Fig. 4; 2) an LED Driver, and storing of a mAs value, per Fig. 5; 3) a collimator, lamp timer and x-ray unit, per Fig. 6; 4) a laser pointer, lamp timer and x-ray unit, per Fig. 7; and 5) a collimator, filament heating and x-ray unit, per Fig. 8. As such, as part of the logic for executing each function of the Figs. 3 - 8, the portable x-ray unit 100 additionally, inherently if not explicitly, contains controllers for performing each of the functions of Figs. 3 - 8. To even more clearly set forth these elements which are apparent to one of skill in the art, upon reading the specification of the instant application, Applicants have amended the specification and added Fig. 9, showing a schematic diagram of the portable x-ray unit 100, in

communication with the handswitch 2, as shown in Fig. 1, and further explicitly showing in a drawing, the logic and various controllers which are understood to be included in the portable x-ray unit 100, in order to perform the operations explicitly set forth in Figs. 3 - 8.

Additionally, paragraph [0019] was amended to be more clear, and to recite, among other things:

In order to use a remote control mode, a standby button of a handswitch is pressed by a series triple click operation, for example, wherein each click lasts a short time, i.e., about a second. [emphasis added by Applicants]

It is noted that the added portion "for example, . . . a second" is supported by the specification of the instant application. More particularly, Fig. 4 describes performing a triple click operation "of short time press", while originally filed claims 3 and 4 recite, among other things, "a triple click step . . . is clicked for a second three times in series".

It is believed that no new matter is added by way of these amendments, as these elements were inherently and/or explicitly present in the instant specification, originally filed claims and drawings 1 - 8, as described above.

Further, it is noted that former claims 3 - 12 relate to a method, and that such methods are fully supported and enabled by the specification and, more particularly, Figs. 3 - 8. In a method, it is understood that **any** means can be used to perform the method. As such, it is not understood how it is alleged that the former method claims 3 - 12 are not enabled. Rather, Applicants' believe that all of the claims, in view of the foregoing, the claims meet the requirements of 35 U.S.C. § 112, first paragraph.

In item 5 of the final Office Action, claim 7 was rejected as allegedly being indefinite under 35 U.S.C. § 112, second paragraph. More specifically, it was alleged in the Office Action that it was not understood what was meant by "the collimator is turned on" and "an X-ray unit is performed". Claim 7 has been amended to recite, among other limitations, "after the collimator is turned on", "an X-ray unit execution is performed", as is precisely shown in Fig. 6. The same amendment was made in claims 8 and 9. As such, it is believed that the claims are definite and supported by the originally filed specification. Further, Applicants do not understand why the term "the collimator is turned on" is not understood. The application specifically teaches that actuation of the handswitch 2 can cause the portable X-ray unit 100 to turn a collimator "on" and "off". See Figs. 6 - 8. It is

accordingly believed that the present claims meet the requirements of 35 U.S.C. § 112, second paragraph.

In item 7 of the **final Office Action**, claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as allegedly being obvious over U. S. Patent No. 5,206,894 to Makrinos et al ("**MAKRINOS**"). Applicants' note that no other art is cited in connection with **MAKRINOS** and that no art **at all** was cited against claims 3 - 12.

Applicants respectfully traverse the rejections of claims 1 and 2 over **MAKRINOS**.

More particularly, claim 1 recites, among other limitations:

a **two-step switch** formed of a standby button and an execution button; [emphasis added by Applicants]

The **final Office Action** clearly recognizes that the **MAKRINOS** reference does not teach or suggest a **two-step switch**, as claimed in Applicants' claim 1. Rather, the **final Office Action** states, on page 3, in part:

Makrinos et al. do not disclose the switch is a two-step switch. However, the switch operates like a two-step switch in that it performs different functions depending on how many times the switch is pushed or clicked (column 4, lines 43 - 60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a two step switch

in place of the switch used by Makrinos et al.,
because a two-step switch is easier to use/click.

Applicants respectfully disagree with the above statements
regarding the substitution of a two step switch for that of
the single switch of MAKRINOS.

First, in the final Office Action, it is stated that:

However, the switch operates like a two-step switch in
that it performs different functions depending on how
many times the switch is pushed or clicked. [emphasis
added by Applicants]

However, the above statement is incorrect. A two-step switch
does not merely perform different functions depending on how
many times the switch is pushed or clicked. Rather, a two-
step switch performs different functions based on the
combination of portions of the two-step switch that are
pressed (i.e., pressing just the standby button, pressing just
the execution button and/or pressing the execution button and
standby button simultaneously). Applicants' claim in claim 1,
among other limitations:

a multi-function operation being performed based on a
click operation of the two-step switch.

Such operations of a two-step switch having two buttons, as
claimed by applicants, cannot be performed by, or analogized

to, any single-button switch. For example, paragraph [0017] of the instant application discloses:

A remote control handswitch for a portable X-ray unit according to the present invention can achieve a multifunction operation based on a pressing time and number of a **standby button** and an **execution button** of a press button unit. [emphasis added by Applicants]

Contrary to the allegation on page 4 of the final Office Action ("However, what is being claimed is a two-step switch, which does not require continuous activation of a plurality of electrical switches"), by its very nature and definition, a two-step switch, as claimed by Applicants' in claim 1, can be operated as a distinct plurality of electrical switches, in different combinations. See also, Fig. 3 of the instant application ("three times execution of short time press of **standby button**"). Try performing a function on the device of **MAKRINOS** that requires pressing of both buttons of Applicants' claimed two-step switch in a particular click pattern, followed by a function wherein just the standby switch is clicked a number of times. It can't be done on the device of **MAKRINOS**. **MAKRINOS** neither teaches, nor suggests pressing two related buttons to perform different functions. As such, Applicants' claimed two-step switch can perform different functions using different combination of the two buttons, depending on the number of presses or clicks of any of the

combinations of the buttons, and such is neither taught, nor suggested, nor obvious over **MAKRINOS**.

In fact, as stated in Applicants' previous response, **MAKRINOS** specifically teaches away from having a plurality of buttons, pressing a combination of which initiates an operation. Col. 2, lines 52 - 56 of **MAKRINOS** states:

Yet another disadvantage of previous X-ray exposure switches is they require the continuous activation of a plurality of electrical switches to prepare the rotating anode X-ray tube and create a radiographic exposure. The problem with these types of switches is that the multiple electromechanical switch mechanisms often jam.

The final Office Action stated, in response to the above, on page 4:

Applicants argue that Makrinos teaches away from the click operation recited in claim 1, and that Makrinos indicates that devices with multiple electromechanical switches require the continuous activation of a plurality of electrical switches to prepare the rotating anode X-ray tube and create a radiographic exposure, and that in these types of switches, the electromechanical switch mechanisms often jam. However, what is being claimed is a two-step switch, which does not require continuous activation of a plurality of electrical switches."

It is believed that Applicants point in citing the passage from **MAKRINOS** was mistaken by the Examiner. Applicants cited the above portion of **MAKRINOS** in order to specifically point to **MAKRINOS**' reasoning why **MAKRINOS** replaced the simultaneous

pressing of multiple switches with a single switch. In doing so, MAKRINOS eliminated any possible construing of his invention to provide multiple switches that can be simultaneously pressed, in favor of a single button that can initiate different operations. As such, MAKRINOS has eliminated from possible use with his invention, Applicants' claimed two-step switch, which includes a plurality of different buttons, as is specifically taught away from, in MAKRINOS. The interpretation in the Office Action must presume that both buttons of Applicants' two-step switch are always pressed simultaneously, in order to equate that button to the button taught in MAKRINOS, and such is not the case. As discussed above, inherently, and as disclosed in the specification paragraph [0017] and Figs. 2 - 8, the buttons of Applicants' two-step switch can be pressed separately, or together, to initiate different functions, and such is specifically taught in MAKRINOS as being undesirable. As such, MAKRINOS specifically teaches away from Applicants' claimed two-step switch and, further, modifying MAKRINOS to include such a two-step switch, made up of a plurality of buttons that can be pressed simultaneously, would destroy the teachings of MAKRINOS.

Additionally, it is well recognized in the art that there must be some motivation in the reference to modify the reference to

achieve Applicants' invention of claim 1. Absent impermissible hindsight reconstruction, there is no teaching or motivation in **MAKRINOS** to modify the device taught in **MAKRINOS** to include a two-step switch, a multi-function operation being performed based on a click operation of the two-step switch. Rather, in the final Office Action it is alleged that:

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a two step switch in place of the switch used by Makrinos et al., because a two-step switch is easier to use/click. [emphasis added by Applicants]

Applicants respectfully disagree with the alleged motivation cited in the final Office Action to modify **MAKRINOS**. To the contrary, a two-step switch is not easier to use/click, for precisely the same reason discussed above. In a two-step switch as claimed by Applicants' in claim 1, the user must be extra cautious in ensuring that only the correct and desired portion of the two-step switch is pressed (i.e., in Fig. 4, only the standby button portion of the two-step switch is pressed to initiate an operation). As stated above, a two-step switch gives the user three possible combinations of activation. The user can press just the standby button; the user can press just the execution button; or the user can press both the standby button and execution button, simultaneously. Each combination of buttons pressed on

Applicants' claimed two-step switch can result in a different operation being performed. To ensure that the desired function occurs, the user must be sure to depress the correct button(s), making operation of the two-step switch much more complicated than the operation of any switch taught by **MAKRINOS**. As such, **MAKRINOS** does not provide any motivation, absent impermissible hindsight reconstruction of Applicants' invention of claim 1, to modify the device of **MAKRINOS**, as alleged in the final Office Action.

Because the **MAKRINOS** reference neither teaches, nor suggests, a two-step switch as recited in claim 1 of the instant application, among other limitations, Applicants' claims are patentable over **MAKRINOS**.

It is accordingly believed that none of the references, whether taken alone or in any combination, teach or suggest the features of claims 1, 3, 4 and 7. Claims 1, 3, 4 and 7 are, therefore, believed to be patentable over the art. The dependent claims are believed to be patentable as well because they all are ultimately dependent on claim 1, 4 or 7.

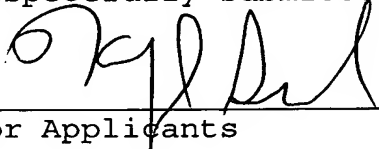
In view of the foregoing, reconsideration and allowance of claims 1 - 12 are solicited.

In the event the Examiner should still find any of the claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out.

Additionally, please consider the present as a petition for a one month extension of time, and please provide a one month extension of time. The instant case is being filed simultaneously with a Request for Continuing Examination (RCE) and the fees in accordance with Section 1.17 for the RCE and a one-month extension of time.

Please provide any additional extensions of time that may be necessary and charge any other fees that might be due with respect to Sections 1.16 and 1.17 to the Deposit Account of Lerner, Greenberg, Stemmer, L.L.P., P.A., No. 12-1099.

Respectfully submitted,



For Applicants

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